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AMSAT NEWS SERVICE
ANS-266

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The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, the Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org <http://amsat.org>

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

ANS-266 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2024 Sept. 22
Registration Continues for the 42nd Annual AMSAT Space Symposium & Annual General Meeting

The 42nd Annual AMSAT Space Symposium and Annual General Meeting will be held on Friday through Saturday, October 25-26, 2024, at the DoubleTree by Hilton Tampa Rocky Point Waterfront in Tampa, Florida.

Highlights of all scheduled events include:

- AMSAT Board of Directors Meeting, October 24-25
- 42nd AMSAT Space Symposium and Annual General Meeting, October 25-26
- Friday Night Social and Auction, October 25
- AMSAT Banquet and Reception, October 26
- AMSAT Ambassador Breakfast (all are welcome), October 27

*Note – if you wish to register guests for the banquet and/or breakfast who are not attending the Symposium sessions, you must register for each event

separately and include your guests with your banquet and breakfast tickets.*

If you are interested in presenting or submitting a paper for inclusion in the Symposium Proceedings, please see the Call for Papers <https://www.amsat.org/2024-symposium/call-for-papers-2024/>.

IMPORTANT: The deadline for Symposium registrations if you want to include the Saturday evening banquet or Sunday breakfast is Friday, October 18th. Meals cannot be ordered after that date.
Click Here to Register Now <https://launch.amsat.org/event-5833792> Hotel Reservations

The rate for a standard room with two Queen beds is $169.00 plus state and local taxes of 14.5%. Rooms may be available for check-in on Wednesday, October 23 and check out Sunday, October 27.

Rooms can be reserved at https://www.hilton.com/en/attend-my-event/radioamateursatellite/.

Reservations may also be made by phone at 813-888-8800. Reference AMSAT to receive the group rate.

*Note: If you are planning on driving to the Symposium or renting a car, parking charges are $20 per night for overnight parking. *

We, at AMSAT, are excited to be able to host our 42nd annual Symposium this year. We hope that you can join us in celebrating Amateur Radio in Space.
Schedule

Thursday, October 24, 2024

8:00 AM – 6:00 PM AMSAT Board Meeting
6:00 PM – 8:00 PM Pre-Registration Check-in

Friday, October 25, 2024

8:00 AM – 12:00 Noon AMSAT Board Meeting (Closed Session)
9:00 AM – 4:00 PM Registration
1:00 PM – 1:15 PM AMSAT Symposium Kickoff, President’s Welcome
1:15 PM – 5:00 PM Paper Sessions
5:00 PM – 7:00 PM Informal Dinner on your own
7:00 PM – 9:00 PM AMSAT Reception and Auction, Cash Bar Available

Saturday, October 26, 2024

8:00 AM – 11:45 AM Registration
8:00 AM – 8:15 AM AMSAT Symposium Welcome
8:15 AM – 12:00 Noon Paper Sessions
1:00 PM – 3:15 PM Paper Sessions
3:30 PM – 4:45 PM AMSAT Annual Meeting & Awards Ceremony
6:00 PM – 7:00 PM Attitude Adjustment (Social), Cash Bar
7:00 PM – 10:00 PM AMSAT Banquet, Cash Bar

Sunday, October 27, 2024

7:30 AM – 9:00 AM AMSAT Ambassador Breakfast (All are welcome)

[ANS thanks the AMSAT Symposium Committee for the above information]

AMSAT Symposium Call for Papers

Papers continue to be accepted for the 42nd annual AMSAT Space Symposium to be held on the weekend of October 25-27, 2024 at the Doubletree by Hilton Tampa Rocky Point Waterfront in Tampa, Florida.

Proposals for symposium papers and presentations are invited on any topic of interest to the amateur satellite community. We request a tentative title of your presentation as soon as possible, with final copy submitted by October 18 for inclusion in the symposium proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV at n8fgv(a)usa.net

[ANS thanks Dan Schultz, N8FGV, AMSAT Symposium Proceedings Editor for the above information]

2024 Coins Are Still Available! Help Support GOLF and Fox Plus.

Join <https://www.amsat.org/join-the-amsat-presidents-club/> the AMSAT President’s Club today!

Results of the 2024 AMSAT Board of Directors Election

The 2024 AMSAT Board of Directors Election period ended on September 15, 2024.

As a result of the election, Mark Hammond, N8MH, Paul Stoetzer, N8HM, and Bruce Paige, KK5DO, have been duly elected to a two-year term on the Board of Directors. Douglas Tabor, N6UA, and Frank Karnauskas, N1UW, will serve as alternate directors for a term of one year.

The results of the voting with 375 ballots cast are as follows:
Mark Hammond, N8MH 295
Paul Stoetzer, N8HM 276
Bruce Paige, KK5DO 223
Douglas Tabor, N6UA 163
Frank Karnauskas, N1UW 111

The membership of the AMSAT Board of Directors for 2024-2025 is:

Barry Baines, WD4ASW
Jerry Buxton, NØJY
Drew Glasbrenner, KO4MA
Mark Hammond, N8MH
Zach Metzinger, NØZGO
Bruce Paige, KK5DO
Paul Stoetzer, N8HM
Douglas Tabor, N6UA (1st Alternate)
Frank Karnauskas, N1UW (2nd Alternate)

Thank you all for participating in this year’s election process.

[ANS thanks Jeff Davis, KE9V, AMSAT Secretary, for the above information]

MESAT1 Telemetry and Testing-Update

The MESAT1 Command and Commissioning Teams wish to thank all that have routinely or even occasionally collected telemetry from MESAT1. Thanks to these reports, the teams are able to make informed and timely decisions about what/when/why/how to do next steps in collaborating with the satellite owners to help with their primary mission. Much is being learned about this new satellite—the University of Maine’s first Cubesat—and AMSAT’s linear transponder onboard. All of the lessons learned will help inform future missions that carry the Linear Transponder Module (or LTM) and the Golf series of satellites. Reports about transponder activities are very helpful, as well.

MESAT 1 *[University of Maine]*

Amateurs are encouraged to visit this link to see in detail all of the callsigns that have contributed to telemetry collection thus far. It's a lot of stations, all around the world: https://www.amsat.org/tlm/leaderboard.php?id=10&db=FOXDB&show=all&period=100

Please continue to collect telemetry! We continue to work on taking and downloading earth images from their cameras. In recent days, we are having the satellite send image blocks both in the mornings and evenings. We expect that to continue in the near future. The transmitter could be on for 5 mins, or perhaps even 10 mins, when over the East coast command stations. Every frame helps us to build an image. Testing is intermittent, but it seems to be more regular right now. When the images aren't being transmitted, MESAT1 is in SAFE mode, sending a couple frames about every 2 minutes. These frames are very important too!

MESAT1 was in HEALTH mode, transmitting telemetry continuously, and the beacon setting is pretty strong as of 11:43z on 19 Sept 2024. The linear transponder was enabled at 0050utc on 20 Sept. 2024. Watch AMSAT-BB for announcements regarding MESAT1 status.

[ANS thanks Mark Hammond, N8MH, AMSAT Director and Command Station for the above information]

Need new satellite antennas?
Purchase M2 LEO-Packs from the AMSAT Store.

When you purchase through AMSAT, a portion of the proceeds goes towards
Keeping Amateur Radio in Space.
https://amsat.org/product-category/hardware/
<https://amsat.org/product-category/hardware/>

GreenCube (IO-117) Ceases Functioning Due to Radiation Damage

The GreenCube satellite, developed by S5LAB, has likely ceased functioning due to radiation damage. After a successful mission that exceeded expectations, the satellite is no longer responding to commands, and its onboard radio is believed to have been compromised by the harsh radiation environment in Medium Earth Orbit (MEO).

Approximately ten days ago, GreenCube experienced a reboot, and telemetry data from the event did not indicate any anomalies. However, the S5LAB team now suspects that the satellite's radio was damaged, leading to the current communication blackout. MEO is notoriously challenging for satellites due to its high radiation levels, and GreenCube was not the only satellite affected. Several other CubeSats launched alongside it only lasted a few days, making GreenCube's extended mission duration a remarkable achievement.

Despite ongoing efforts to send commands and reactivate the satellite, the team remains pessimistic about restoring GreenCube's functionality. The satellite's survival in the hostile MEO environment is seen as a testament to its robust design, but the likelihood of recovery is slim.

At this time, no successor to GreenCube is planned, primarily due to the infrequency of launch opportunities to MEO. Launches to this orbit are rare, which complicates the prospect of future missions.

In response to the satellite's success and the interest it generated among radio amateurs, S5LAB has promised to host a webinar in collaboration with AMSAT Italia. The event will provide insights into the GreenCube mission, sharing the challenges and triumphs of the satellite's journey. This is an

opportunity for the amateur radio community to learn more about the satellite’s impact and the technical details behind its impressive mission.

While GreenCube’s operational life may have ended, its contributions to satellite technology and amateur radio will be remembered as a significant milestone.

[Information from Piero IØKPT via Facebooks Greencube Group]

[ANS thanks AMSAT-UK for the above information]

Want to fly the colors on your own grid expedition?

Get your AMSAT car flag and other neat stuff from our Zazzle store!
25% of the purchase price of each product goes towards
Keeping Amateur Radio in Space
https://www.zazzle.com/amsat_gear <https://www.zazzle.com/amsat_gear>

Changes to AMSAT-NA TLE Distribution for 20 September

Two Line Elements or TLEs, often referred to as Keplerian elements or keps in the amateur community, are the inputs to the SGP4 standard mathematical model of spacecraft orbits used by most amateur tracking programs. Weekly updates are completely adequate for most amateur satellites. TLE bulletin files are updated daily in the first hour of the UTC day. New bulletin files will be posted immediately after reliable elements become available for new amateur satellites. More information may be found at https://www.amsat.org/keplerian-elements-resources/

No changes have been announced for this week.

[ANS thanks Joe Fitzgerald, KM1P, AMSAT Orbital Elements Manager for the above information]

ARISS NEWS

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.

[image: ARISS News]

RECENTLY COMPLETED:
Kordylewski Youth Astronomical Observatory in Niepołomice, Niepołomice, Poland, direct via SP9MOA
The ISS callsign was OR4ISS
The crewmember was Matthew Dominick KCØTOR
The ARISS mentor was SP3QFE
Contact successful: Thu 2024-09-19 16:18:02 UTC 53 degrees elevation

Sailing Event, Moscow, Russia, direct via TBD
The ISS callsign was RSØISS
The crewmember was Aleksandr Grebyonkin RZ3DSE
The ARISS mentor was RV3DR
Contact successful: Sat 2024-09-21 16:25 UTC

UPCOMING:
Amur State University, Blagoveshchensk, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled crewmember is Ivan Vagner
The ARISS mentor is RV3DR

Contact is go for Tue 2024-09-24 09:25 UTC

Tatarstan, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled crewmember is Aleksey Ovchinin
The ARISS mentor is RV3DR
Contact is go for Fri 2024-09-27 13:20 UTC

Khazar University, Dunya School, Baku, Azerbaijan, direct via 4K6EH
The ISS callsign is presently scheduled to be OR4ISS
The scheduled crewmember is Matthew Dominick KCØTOR
The ARISS mentor is IN3GHZ
Contact is go for: Sat 2024-09-28 10:50:21 UTC 28 degrees maximum elevation

The crossband repeater continues to be *ACTIVE* (145.990 MHz up {PL 67} & 437.800 MHz down). If any crewmember is so inclined, all they have to do is pick up the microphone, raise the volume up, and talk on the crossband repeater. So give a listen, you just never know.

The packet system is currently *MISCONFIGURED* (145.825 MHz up & down). Ham TV is currently *STOWED* (2395.00 MHz down). SSTV is currently *STOWED* (145.800 MHz down).

As always, if there is an EVA, a docking, or an undocking; the ARISS radios are turned off as part of the safety protocol. *POWERING OFF FOR SOYUZ UNDOCKING ON SEP 23*.

Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.

The latest information on the operation mode can be found at https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

Upcoming Satellite Operations

None currently listed.

A growing number of satellite rovers are currently engaged in sharing their grid square activations on https://hams.at. By visiting the website, you gain easy access to comprehensive information about the operators responsible for activating specific grid squares. Additionally, you have the ability to assess the match score between yourself and a particular rover for a given pass, while also being able to identify the upcoming satellite passes that are accessible from your location.

[ANS thanks Ian Parsons, K5ZM, AMSAT rover page manager, for the above information]

AMSAT Ambassador Activities

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

October 5, 2024
North Star Radio Convention
Hennepin Technical College (North Campus)

Brooklyn Park, Minn.
https://conv2023.tcfmc.org/
AMSAT Forum and Information Table
KØJM and ADØHJ

October 5, 2024
Radio Society of Tucson
Calvary Tucson Church
7811 E. Speedway
Tucson, AZ
https://k7rst.club/2024/07/tucson-autumn-ham-fest-2024/
N1UW

October 18-20, 2024
Pacificon 2024, ARRL Pacific Division Conference
San Ramon, CA
WUØI

October 25-27, 2004
AMSAT Space Symposium and Annual General Meeting
Double Tree Rocky Point Waterfront Hotel
Tampa Bay, FL

November 2-3, 2024
Stone Mountain Hamfest, ARRL State Convention
Stone Mountain, GA
https://stonemountainhamfest.com/
K4RGK

November 9, 2024
Oro Valley Amateur Radio Club
Marana Middle School
11285 West Grier Rd.
Marana, AZ 85653
https://www.tucsonhamradio.org/copy-of-hamfest-2022
N1UW

February 20-22, 2025
Yuma HAMCON
Yuma, AZ
N1UW

[ANS thanks the AMSAT Events page for the above information]

Satellite Shorts From All Over

+ The AMSAT-UK 2024 Colloquium will take place alongside the RSGB Convention at Kents Hill Park Conference Centre, Milton Keynes, MK7 6BZ on the weekend of 12-13 October 2024. Registration for the event is at https://rsgb.org/main/rsgb-2024-convention/ and a limited number of tickets for the AMSAT banquet are on sale via the AMSAT-UK Online Shop https://shop.amsat-uk.org/. Deadline for presentation proposals is imminent – contact Iain Young, G7III, g7iii(a)g7iii.net, if you have a presentation proposal. (ANS thanks Iain Young, G7III, and AMSAT-UK for the above information.)

+ The FUNcube team are pleased to announce that User Rankings, Realtime Data, and Whole-Orbit Data (WOD) are all now being displayed in FUNcube Data Warehouse after the recent disruption. Access the new site at http://warehouse.funcube.org.uk/. Fitter message display will follow soon as will be the ability to download WOD files. (ANS thanks Dave Johnson, G4DPZ, and the FUNcube Team for the above information.)

+ NASA astronaut Don Pettit, KD5MDT, alongside Soyuz commander Alexey

Ovchinin and cosmonaut Ivan Vagner, arrived at the International Space Station Wednesday, September 11 after launching aboard the Roscosmos Soyuz MS-26 spacecraft from the Baikonur Cosmodrome in Kazakhstan. The trio will join NASA astronauts Tracy C. Dyson, Mike Barratt, KD5MIJ, Matthew Dominick, KCØTOR, Jeanette Epps, KF5QNU, Butch Wilmore, and Suni Williams, KD5PLB, as well as Roscosmos cosmonauts Nikolai Chub, Alexander Grebenkin, and Oleg Kononenko, RN3DX. Expedition 72 will begin Monday, Sept. 23, upon the departure of Dyson, Chub, and off-going station commander Kononenko, completing a six-month stay for Dyson and a year-long expedition for Chub and Kononenko. (ANS thanks NASA for the above information.)

+ Registration for the 2024 NASA Space Apps Challenge global hackathon (October 5-6) is open and challenges are online at https://www.spaceappschallenge.org/nasa-space-apps-2024/challenges/. (ANS thanks The Orbital Index and NASA for the above information.)

+ Tracking sleuth Scott Tilley, VE7TIL, has discovered that the orbiter for China’s Chang’e-6 lunar sample return mission is now parked at the second Sun-Earth Lagrange (L2). After delivering the samples to Earth, the orbiter fired its engines to avoid reentering Earth’s atmosphere, setting off on a new trajectory. L2 is located approximately 1.5 million kilometers from Earth, directly on the opposite side of the Earth from the Sun. China’s space authorities have yet to provide an update on the orbiter and its plans. However, the Chang’e-6 orbiter’s voyage fits into a pattern of China using Chang’e spacecraft for extended missions as tests for future endeavors. (ANS thanks Space News for the above information.)

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week’s ANS Editor, Mark Johns, KØJM
mjohns [at] amsat.org